



Frequently Asked Questions about Sarin

What is sarin?

Sarin is a clear, colorless, tasteless, and odorless liquid. It can also evaporate into a vapor (gas) and spread into the environment. Sarin is also known as GB.

Sarin is a nerve agent developed for use in chemical warfare. Nerve agents are the most toxic and rapidly acting of the known chemical warfare agents. Nerve agents are similar to certain kinds of insect killers, but much more powerful. Sarin was originally developed in 1938 in Germany as a pesticide.

Where is sarin found and how is it used?

Sarin and other nerve agents may have been used in chemical warfare during the Iran-Iraq War in the 1980s. Sarin was used in two terrorist attacks in Japan in 1994 and 1995. Sarin is not found naturally in the environment.

How can people be exposed to sarin?

Following release of sarin into the air, people can be exposed through skin contact or eye contact. They can also be exposed by breathing air that contains sarin.

Sarin mixes easily with water, so it could be used to poison water. Following the release of sarin into water, people can be exposed by drinking the water or getting it on their skin.

If food were contaminated with sarin, people would be exposed by eating the contaminated food.

Clothing contaminated with sarin vapor can release the nerve agent for about 30 minutes, which can lead to the exposure of other people.

Because sarin breaks down slowly in the body, it will accumulate in people who are repeatedly exposed. These people may suffer more harmful effects.

Sarin vapor is heavier than air. The vapor will sink to low-lying areas and create a greater exposure hazard there.

How does sarin work?

The degree of sarin poisoning depends on

- the amount of sarin to which a person was exposed
- the route of exposure
- the length of time of exposure.

Nerve agents affect the body's "off switch" for glands and muscles. Without an "off switch," the glands and muscles are constantly being stimulated. The muscles may get so tired that breathing may stop.

Sarin is the most unstable of the nerve agents. It can quickly evaporate from a liquid into a vapor and spread into the environment. People can be exposed to the vapor even if they do not come in contact with the liquid form of sarin.

Sarin evaporates quickly, making it an immediate but short-lived threat.

Symptoms will appear within a few seconds after exposure to the vapor form of sarin.

When a person is exposed to the liquid form, symptoms will appear within a few minutes to 18 hours after exposure.

What are the immediate signs and symptoms of sarin exposure?

People may not know that they were exposed because sarin has no odor.

People may be exposed to a low or moderate dose of sarin by

- breathing contaminated air
- eating contaminated food
- drinking contaminated water
- touching contaminated surfaces.

People exposed to sarin may experience some or all of the following symptoms within seconds to hours of exposure:

- Runny nose
- Watery eyes
- Small, pinpoint pupils
- Eye pain
- Blurred vision
- Drooling and excessive sweating
- Cough
- Chest tightness
- Rapid breathing
- Diarrhea
- Increased urination
- Confusion
- Drowsiness
- Weakness
- Headache
- Nausea, vomiting, and/or abdominal pain
- Slow or fast heart rate
- Low or high blood pressure

Even a small drop of sarin on the skin can cause sweating and muscle twitching where sarin touched the skin.

Exposure to large doses of sarin in any form may result in:

- Loss of consciousness
- Convulsions
- Paralysis
- Respiratory failure possibly leading to death.

What are the long-term health effects of sarin?

Severely exposed people are not likely to survive. Mild or moderately exposed people usually recover completely. Unlike some pesticides, nerve agents have not been associated with neurological problems lasting more than one to two weeks after exposure.

What should people do if they are exposed to sarin?

The best thing to do is avoid exposure, if possible. Once a person has been exposed, they can recover if they seek medical attention and get the antidotes right away.

If you think you may have been exposed to sarin, quickly leave the area where the sarin was released and get to fresh air. This is highly effective in reducing the possibility of death from exposure to sarin vapor.

If the sarin was released indoors, get out of the building.

If the sarin was released outdoors, move away from the release area. Go to the highest ground possible. Sarin is heavier than air and will sink to low-lying areas.

Removing and disposing of clothing

If a person thinks they have been exposed to sarin, they should remove their clothing, rapidly wash their entire body with soap and water, and get medical care as quickly as possible.

Quickly take off clothing that has liquid sarin on it. Clothing that has to be pulled over the head should be cut off instead. If possible seal the clothing in a plastic bag. Place the sealed bag inside another plastic bag. Removing and sealing the clothing will help protect people from any chemicals that might be on their clothes.

If clothes were placed in plastic bags, call the local or state health department or tell emergency personnel when they get there. Do not handle the plastic bags.

If you help other people remove their clothes, avoid touching contaminated areas of clothing. Remove the clothing as quickly as possible.

Washing the body

As quickly as possible, wash any liquid sarin from the skin with large amounts of soap and water.

Wash your eyes with plain water for 10 to 15 minutes if you experience burning eyes or blurred vision.

If sarin has been swallowed, do not induce vomiting or give fluids to drink.

Seek medical attention immediately. Dial 911 and explain what has happened.

How is sarin exposure treated?

Treatment consists of removing sarin from the body as soon as possible and providing supportive medical care in a hospital setting. Antidotes are available for sarin. They are most effective if given as soon as possible after exposure.

How dangerous is sarin?

The Centers for Disease Control and Prevention (CDC) recognizes sarin as a potential agent of bioterrorism.

What is the public health system in New Jersey doing to prepare for a possible biological attack?

New Jersey and the CDC are working together to prepare for all potential health hazards, including bioterrorism.

Activities include:

- Developing plans and procedures to respond to biological attacks
- Training and equipping emergency response teams, gathering samples and performing tests to help state and local governments control infection
- Educating healthcare providers, the media and the general public about what to do in the event of an attack
- Working closely with local health departments, veterinarians and laboratorians to monitor for suspected cases of bioterrorism
- Working with hospitals, laboratories, emergency response teams and healthcare providers to make sure they have the supplies they need in the event of an attack.

Where can I get more information?

- Your healthcare provider
- Your local department of health
- The New Jersey Department of Health and Senior Services

Website – www.nj.gov/health

DHSS Communicable Disease Service at (609) 588-7500

- CDC

www.bt.cdc.gov/agent/sarin

1-800-CDC-INFO (4636) for assistance in English and Spanish

TTY 1-888-232-6348

E-mail: cdcinfo@cdc.gov